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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Group Art Unit: 1765

Maximilian Stadler et al.

Examiner: Shamim Ahmed

Serial No.: 10/686,365

Filed: October 15, 2003

For: PROCESS AND DEVICE FOR THE WET-CHEMICAL
TREATMENT OF SILICON

Attorney Docket No.: WSAG 0131 PUS

RESPONSE TO RESTRICTION REQUIREMENT

Mail Stop Amendment
Commissioner for Patents
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Response to the Restriction Requirement dated June 15, 2005, Applicants provisionally elect the group I claims, claims 1 - 7, with traverse.

The restriction is based on the unsupported premise that the apparatus of claims 8 - 10 can be used for a process other than the process of claims 1 - 7. The Office specifically recites its use in a process of etching metals or ceramics. However, the Office cites no evidence in support of its premise and Applicants do not believe one skilled in the art would use the apparatus of claims 8 - 10 for such purposes.

The etching of silicon by nitric acid/hydrofluoric acid first generates SiO_2 by oxidation, followed by dissolution of SiO_2 into aqueous SiF_6^{2-} by HF. Fresh etchant is activated by nitrogen oxides derived from an on-going etchant process. Thus, the new etchant

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8

I hereby certify that this paper, including all enclosures referred to herein, is being deposited with the United States Postal Service as first-class mail, postage pre-paid, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, U.S. Patent & Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 on:

July 15, 2005
Date of Deposit

William G. Conger
Name of Person Signing


Signature

does not have to be treated with waste silicon to cause activation.

The apparatus would not be used with other metals or with ceramics, or even with glass, since these substrates do not require both an oxidant (HNO_3) and a solubilizer (HF), nor do they require activation, which is believed to be unique to silicon. Once skilled in the art would certainly not use such an apparatus, involving transfer of NO_x from a current etchant into fresh etchant when such is not necessary. In the absence of any evidence which supports the use of the HNO_3/HF -containing etchant and fresh etchant and accommodation of transfer of NO_x from the former to the latter in etching metals other than silicon, the restriction should be vacated and the claims rejoined. Moreover, since the apparatus is concerned intimately with the silicon wafer etching process, a separate search should not be required, and thus no undue burden will be placed on the Office by rejoinder. Applicants accordingly solicit rejoinder.

Please note that a Notice of New Correspondence Address and Revocation of Power of Attorney has been submitted in this case on April 26, 2005. Apparently, the Office has not scanned these documents into the system. Separate documents will be filed on Monday, July 18, 2005. A copy of the original is included herewith.

Respectfully submitted,
Maximilian Stadler et al.

By: 

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Date: July 15, 2005

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